

Amendments to the Claims:

Please amend claims 2, 3, 5, 9-13, 15, 17, 18 and 20. Please cancel previously presented claims 1, 8, 14 and 19, and add new claims 21-24. Following is a complete listing of the claims pending in the application, as amended:

1. (Canceled)
2. (Currently Amended) ~~The~~A method of claim 1, ~~further detecting images and characters in a master copy, the method~~ comprising:
determining a background color of said master copy;
separating content of said master copy into at least one image and at least one character based at least in part on said background color;
processing said image with halftone processing;
processing said character with line art processing;
combining said processed image and processed character as a whole;
condensing said master copy into a condensed area based at least in part on said background color;
cutting transversely the entirety of said condensed area;
cutting vertically the entirety of said transversely cut area into several individual areas;
choosing a second background color from at least one of said individual areas;
marking at least one of said individual areas ~~with~~ containing said image as an image area;
marking at least one of said individual areas ~~with~~ containing said character as a character area;
utilizing said second background color to condense said individual areas; and
repeating said condensing of said individual areas if said image area and said character area of said individual areas are not identifiable.

3. (Currently Amended) The method of claim 12, wherein said halftone processing comprises a dithering process.

4. (Previously Presented) The method of claim 3, wherein said dithering process comprises a sampling mode dithering.

5. (Currently Amended) A method of detecting images and text in a master copy, the method comprising:

- a. choosing a first background color from the master copy;
- b. ~~separating the content of, wherein the master copy into images and text~~
based includes at least in part on the one first background color individual area, and wherein each first individual area includes at least one of an image portion and a text portion;
- c. condensing the master copy based at least in part on the first background color;
- d. cutting transversely the entirety of the condensed master copy based at least in part on the first background color into additional first individual areas;
- e. cutting vertically the transversely cut entirety of the master copy based at least in part on the into additional first background color in order to create individual areas;
- f. ~~or each first individual area—~~
choosing a second background color from the first individual areas;
- g. ~~identifying determining whether the first individual area includes an~~
image and portion or a text portion based at least in part on the second background color;
- h. marking the individual areas with images as image areas;
- i. ~~if the first individual area includes an image portion, marking the~~
first individual area as an image area;

- if the first individual area includes a text portion, marking the first individual areas with text area as a text areas; and
- j. ~~if the individual areas cannot be identified, if the first individual area does not include either an image portion or a text portion, then—~~
replacing the first background color with the second background color, ~~condensing the unidentifiable individual areas based at least in part on the second background color, and then repeating d to j;~~
- k. ~~condensing the first individual area based at least in part on the second background color;~~
cutting transversely the first individual area into second individual areas;
cutting vertically the first individual area into second individual areas; and
for each second individual area—
determining whether the second individual area includes an image portion or a text portion based at least in part on the second background color;
if the second individual area includes an image portion,
marking the second individual area as an image area;
and
if the second individual area includes a text portion, marking the second individual area as a text area;
- processing the ~~images~~image areas with halftone processing;
- l. ~~processing the text areas with line art processing; and~~
- m. ~~outputting the processed images and processed text as a whole.~~

6. (Previously Presented) The method of claim 5, wherein the halftone processing comprises a dithering process.

7. (Previously Presented) The method of claim 6, wherein the dithering process comprises a sampling mode dithering.

8. (Canceled)

9. (Currently Amended) ~~The A~~ method of claim ~~8, detecting images and~~ further ~~text in a master copy~~, the method comprising:

choosing a background color from said master copy;

dividing content of said master copy into images and text with said chosen background color as a criterion;

processing said images with halftone processing to present said images with a clear tone level graduation;

processing said text with line art processing to clearly present the text;

combining said processed images and processed text;

condensing said master copy into a condensed area based at least in part on said background color;

cutting transversely the entirety of said condensed area;

cutting vertically the entirety of said transversely cut area into several individual areas;

choosing a second background color from at least one of said individual areas;

marking at least one of said individual areas with said images as an image area;

marking at least one of said individual areas with said text as a text area;

utilizing said second background color to condense said individual areas; and

repeating said condensing if said image area and said text area of said individual areas are not identifiable.

10. (Currently Amended) The method of claim ~~89~~, wherein the method is carried out in a scanner.

11. (Currently Amended) The method of claim 89, wherein the method is carried out in a fax.

12. (Currently Amended) The method of claim 89 wherein processing said images with halftone processing to present said images with a clear tone level graduation includes processing said images with halftone processing to present said images with a clear tone level graduation divided into 1024 levels.

13. (Currently Amended) The method of claim 89 wherein processing said text with line art processing to clearly present the text includes processing said text with line art processing having two values for said text.

14. (Canceled)

15. (Currently Amended) The apparatus of claim 44~~20~~ wherein the component configured to process the images with halftone processing is further configured to process the images with a dithering process.

16. (Previously Presented) The apparatus of claim 15 wherein the component configured to process the images with a dithering process is further configured to process the images with a sampling mode dithering.

17. (Currently Amended) The apparatus of claim 44~~20~~ wherein the apparatus is a fax machine.

18. (Currently Amended) The apparatus of claim 44~~20~~ wherein the apparatus is a copier.

19. (Canceled)

20. (Currently Amended) ~~The apparatus of claim 19, further comprising a component configured to transversely and/or vertically cut the condensed area. An apparatus that automatically detects images and text in a master copy, the apparatus comprising:~~

a component configured to determine a background color of the master copy;

a component configured to separate content of the master copy into images and text based at least in part on the background color;

a component configured to process the images with halftone processing;

a component configured to process the text with line art processing;

a component configured to combine the processed images and the processed text;

a component configured to condense the master copy into a condensed area based at least in part on the background color; and

a component configured to transversely and vertically cut the entirety of the condensed area.

21. (New) A method of detecting images and text in a master copy, the method comprising:

choosing a first background color from the master copy, wherein the master copy includes at least one first individual area, and wherein each first individual area includes at least one of an image portion and a text portion;

condensing the master copy based at least in part on the first background color;

attempting to transversely divide the condensed master copy into additional first individual areas;

attempting to vertically divide the condensed master copy into additional first individual areas;

choosing a second background color from the first individual area;

based at least in part on the second background color, attempting to determine whether a first individual area includes an image portion or a text portion;

if the condensed master copy cannot be transversely divided into additional first individual areas, and the condensed master copy cannot be vertically divided into additional first individual areas, and the first individual area cannot be determined as including an image portion or a text portion, then marking the first individual area as an image area;

otherwise, for each first individual area—

choosing a third background color from the first individual area;

determining whether the first individual area includes an image portion or a text portion based at least in part on the third background color;

if the first individual area is identified as an image portion, marking the first individual area as an image area; and

if the first individual area includes a text portion, marking the first individual area as a text area;

processing the image areas with halftone processing;

processing the text areas with line art processing; and

outputting the processed images and processed text as a whole.

22. (New) The method of claim 21, wherein the halftone processing comprises a dithering process.

23. (New) The method of claim 22, wherein the dithering process comprises a sampling mode dithering.

24. (New) The method of claim 22, wherein the method is carried out in at least one of a scanner and a fax.